

PECULIARITIES OF TEACHER- STUDENT INTERACTION IN E-LEARNING ENVIRONMENT

Mārtiņš Spridzāns

State Border Guard College, Latvia, e-mail: martins.spridzans@rs.gov.lv

Abstract. *While implementing e-learning courses at the State Border Guard College of the Republic of Latvia, the author of this article has discovered several differences in communication between students compared to traditional learning. Since the e-learning is going to expand in the future it is essential to explore theoretical and practical concepts on teacher student interaction peculiarities in e-environment. The author has gathered suggestions and proposals on best practices of teacher student interaction in order to improve e-learning outcomes. The goal of the article is to explore the peculiarities of the interaction between teachers and students in e-learning environment and provide suggestions on improving the efficiency of teacher-student interaction in e-learning.*

Keywords: *e-learning, facilitation, interaction, outcomes, peculiarities.*

Introduction

The development of e-learning in the State Border Guard College (hereinafter – the College) has been one of the key priorities in order to facilitate learning opportunities. Furthermore, the development of e-learning is going to be one of the main topics of discussion in the nearest future since the Ministry of the Interior plans to analyse the ways on e-learning development by finding common solutions and possibilities to unify the e-learning platforms among subordinated law enforcement training institutions. The variations of using e-environment and the phenomenon of introducing e-learning as an innovative approach to the border guards' learning have developed very rapidly. Consequently, it is important to analyse and share the best practices of e-learning approaches and models currently implemented at the College. In order to find research based solutions on the ways for improving teacher-student interaction in e-learning system for border guards, the author has explored several scientific researches and summarised suggestions in order to facilitate the development teacher-student interaction during e-learning process. Research period: 2016 – 2018

Aim and tasks of the paper: To analyse theoretical and practical findings on peculiarities of teacher-student interaction in e-learning process and provide suggestions for improvement of teacher-student interaction to enhance the learning outcomes.

Research methods: Meta-analysis, experimental and descriptive-quantitative methods have been used during research period.

Hypothesis: Peculiarities of teacher-student interaction should be considered and observed during e-learning process in order to reach the best learning outcomes in order to substitute physical teachers-student interaction as in traditional learning model.

Taking into account the experience accumulated over time both in system development, administration and implementation of e-courses, the author of this report shall reflect on theoretical and practical aspects of e-learning as well as share the best practices and suggestions on the ways to improve e-learning system for law enforcement agencies.

Peculiarities of teacher-student interaction during e-learning courses at the State Border Guard College

To promote access and facilitate the learning process in College since 2008, e-learning system for training purposes of the border guards is being used. It is based on the course management system MOODLE (Modular Object-Oriented Dynamic Learning Environment) which is intended for management and implementation of e-learning courses. Currently there are eleven supplementary training courses in e-learning mode implemented, and there is a continuous tendency to increase the number of traditional course transfer/adoption to e-learning component. Hence, one must agree with Wright noting: "As face-to-face interaction between student and instructor is not present in online learning environments, it is increasingly important to understand how to establish and maintain social presence in online learning". (Wright, 2015).

Research shows that online learning is most effective when delivered by teachers experienced in their subject matter. According to Feenberg, the best way to maintain the connection between online education and the values of traditional education is through ensuring that online learning is "delivered" by teachers, fully qualified and interested in teaching online in a web-based environment (Feenberg 1998).

According to handbook of teaching and learning online (hereinafter in the article – the handbook), in considering how you communicate with students about course goals and your expectations, it is important to remember that the students experience your course on their own and will come to the course with varying levels of technical expertise. Place important information in a variety of places, and repeat it often, in order to enhance the chances that students will pay attention to it. Give students a clear overall understanding of the course structure Students need a clear message of the "vision" of the course so provide them a sense of the overall

landscape of the course. (Zucker, Feldman). The authors of the handbook note that e-courses' teachers will most likely not be available to respond immediately, when students would email questions regarding assignments or due dates, hence, posting the programme on the course homepage would eliminate confusion, as students can access the course homepage at any time of the day or night. The author strongly agrees with the handbook developers that teachers cannot always be online to answer questions and, to cut down on the number of individual questions, it is necessary to set up *a housekeeping clearinghouse* section "Frequently Asked Questions", where students can post a question and get the answers about the general course information. Although the e-learning platform of the College does not include FAQ section, the teachers provide the course program, specific instructions and important dates in printed version during the face-to-face introduction session at the College. Proof of the efficiency of providing printed materials is the recent statistical analysis by the author on students' "interest" to view the syllabus of the course: it is rather low, since only 15% of 69 users during the last nine months have viewed the file. On the other hand, it is very useful in case there is no face-to-face sessions. Furthermore, to avoid questions overload, teachers must encourage students to go to FAQs section of the course before asking the instructor.

The authors of the handbook conclude that students of online course must feel that teachers are approachable. Often, the demands on teachers are greater in online courses, so it is important to explore the variety of ways the teacher can send a message of availability. One way to bridge the distance between faculty and student is to address students by name. Praise student-initiated contact. To make teachers seem approachable to students, the handbook suggests to try using a more informal tone. The author agrees that it is important, whenever possible, to schedule an in-person meeting of the entire class, if possible, meet with students in person for one session at the beginning of the semester. Meeting in person, helps students associate names with faces and can be an effective, timely way to accomplish many of the administrative tasks essential to the course.

The authors of the handbook suggest **to generate frequent communication**. Students need to have a sense the instructor is really "there," not "missing in action." This means responding in a timely manner to individual questions or issues that are raised in discussion groups. It also means making your presence known by participating in online discussions, giving students regular feedback on their work and their comments, and being flexible enough to make changes to the course mid-stream based on student feedback.

A good method for group collaboration is to assign discussion group leaders or project team leaders to facilitate group work. Assigning team

leaders is one way to ensure that students receive ample feedback. Make sure that the team leader disseminates information to every member of the team. Part of the responsibility of the team leader should be to report to you frequently on the progress of the team.

It is important to remember that, in the virtual classroom, neither the instructor nor the student has the visual cues of face-to-face communication. This also means the students have fewer methods for determining whether their efforts are comparable to those of their peers and for assessing how they are doing in the class. Students will use the cues that are available (virtually, all of them in writing) to help them to understand the classroom climate. Therefore, the way the instructor shapes the course climate through written comments and the tone of communications to students is particularly important.

- Consider the tone of your own responses to students. Attitude comes through in writing. Are you sounding impatient? Supportive? Praise and model appropriate tone.
- Use private email for sensitive communications. Use threaded discussions for group conversations. Use private emails to comment on individual student contributions and criticism (Zucker, Feldman).

While implementing e-learning course “Professional English language terminology” (14 weeks), the author has discovered that, without teacher participation, online communication has the tendency to decrease and eventually fade out. Teachers should engage students in their learning and develop a sense of community to encourage student discussion online; hence according to handbook while discussions can be a useful tool, they need careful thought and organization. Among the things teachers have to consider when facilitating online discussions is how to do the following:

- motivate students to participate;
- encourage substantive and relevant responses;
- determine the role of the instructor in guiding, moderating, and evaluating the quality of student participation.

The handbook suggests to **structure discussions so that they are meaningful to students**. Discussions, in which students are simply asked to repeat course material, do not engage students’ response. Consequently, students come to see repetitive discussions as unimportant to the learning experience. Engaging topics for online discussions include:

- reacting to a controversial reading;
- feedback on an exercise performed at home;
- debate;
- case study.

The author strongly agrees with the suggestion of the handbook to **make discussion participation “count” in grading policies**. By assigning a portion of the final class grade for “discussion,” you can provide students an incentive to actively participate in online discussions. Use controversial topics to facilitate discussion. Controversial topics encourage greater student participation. The controversial topic elicits divergent opinions and promotes critical thinking. Divide students into discussion groups and change the discussion groups during the semester. By dividing students into small discussion groups, the class will feel more intimate. Students do not need to read all postings in order to participate effectively in online discussions. By changing the composition of the groups over the semester, students will get to know many members of the class overtime, get varied perspectives, and learn how to navigate varied online conversation styles. Make opportunities for interaction exciting. Invite guests (experts and other professionals) to participate in threaded discussions or chat rooms. Adding new insights will stimulate more discussion. Ask students to facilitate online discussions. If a student asks a question, ask other students to respond. By assigning students as discussion facilitators, more students will be involved in the discussion (Zucker, Feldman, p. 34).

Whilst performing information analysis, the author has discovered a practical guide on the ways to improve teacher-student interaction within the Hanover research centre report “Best Practices in Online Teaching Strategies”. According to the report, a survey on types of discussion questions used by online instructors revealed that the questions could be grouped into the following categories:

- Interest-getting and attention-getting questions. Example: "If you awakened in the year 2399, what is the first thing you would notice?"
- Diagnosing and checking questions. Example: "Does anyone know Senge's five principles of a learning organization?"
- Recall of specific facts or information questions. Example: "Who can name the main characters in Moby Dick?"
- Managerial questions. Example: "Did you request an extension on the assignment due date?"
- Structure and redirect learning questions. Example: "Now that we have discussed the advantages of, and limitations to, formative evaluation, who can do the same for summative evaluation?"
- Allow expression of affect questions. Example: "How did you feel about our online guest's list of ten things trainers do to shoot themselves in the foot?"
- Encourage higher-level thought processes questions. Example: "Considering what you have read, and what was discussed in the

posts this past week, can you summarize all the ways there are to overcome obstacles to effective teamwork?"

During the discussion process, it is important that instructors continuously manage students' ideas and further facilitate interactions. However, if the online discussion is going well without instructor feedback, it is often best for teachers to wait to jump into the discussion until the students' responses are waning. At that point, it is recommended that instructors summarize key points or ask prompting questions to recharge the discussion. The second strategy to facilitate interactivity – to encourage student collaboration – relies on the use of educational technologies to simulate face-to-face meetings, when students work together on assignments (Hanover Research Council, 2009).

Model Effective Online Interaction

According to the report, Hanover Research Council instructors can model effective interaction through frequent interactions with students that:

1. Respond to the students' comments and questions within time frames set at the beginning of the course. Instructors make sure to notify students if these time frames change, or if they will be unavailable for some period during the semester.
2. Provide general feedback to the entire class on specific assignments or discussions, while at the same time providing individual encouragement and comments to the students. Feedback on graded assignments should recognize good work and make suggestions for improvement.
3. Provide a weekly wrap-up before the next lesson and introduce each new week with an overview of the lesson plan and deadlines.
4. Monitor Student Progress and Encourage Lagging Students, because students have different learning styles. The instructors should monitor students and identify those who are lagging. Important points to aid the monitoring process include:
 - 4.1. Instructors' awareness that students who fall behind are in jeopardy of not completing the course which may endanger their financial aid.
 - 4.2. Use of available educational technology tools, such as course management systems, to track student progress in course activities.
 - 4.3. Contact students who have not logged in for over a week to inquire whether they are experiencing technical difficulties or problems with course content/activities. If students can't

participate due to technical problems, connect them immediately to technical help.

- 4.4. Contact students who have not completed assignments by email or phone. Include flexibility in grading if possible (i.e. allow students to drop lowest grade, give choices for assignments, etc.) (Hanover Research Council, 2009).

During the research, the author has identified strategies that can increase interaction in online learning environments. These strategies are organized by the three types of interaction defined by Moore (1989):

1. Learner-Instructor Interaction

Interaction between the instructor and learners has been found to be the most important type of interaction in online environments. Frequent interaction with the instructor helps learners feel a greater sense of community and leads to higher levels of student engagement (Brinthaupt, Fisher, Gardner, Raffo, & Woodard, 2011; Mayes et al., 2011).

Shackelford and Maxwell (2012) identified seven types of learner-instructor interaction:

- **Providing information on expectations**

Online instructors need to communicate their expectations for online participation as well as course procedures. One easy way to do this is by creating a weekly screencast or podcast to model and explain expectations for online learners.

- **Participating in discussions**

When instructors are absent from online discussions, learning and engagement are low (Journell, 2008). Just as in face-to-face discussions, online instructors need to provide guidance and feedback to help shape the conversation and keep it connected to key learning outcomes.

- **Providing support and encouragement**

Providing encouraging feedback does not necessarily need to take extra time, as it can be woven into content-related feedback. Online instructors can use text, audio, or video to provide encouragement to students.

- **Providing timely feedback**

Learners in traditional classrooms get ongoing feedback through verbal and nonverbal cues which are missing in online settings. Synchronous class meetings provide a good opportunity for online instructors to give general feedback to the class, while emails, podcasts, blog comments, and discussion board replies allow for individual feedback.

- **Using multiple modes of communication**

Using a variety of communication types increases the likelihood that learner preferences will be met. Online communication can happen via synchronous class meetings, one-on-one virtual meetings, emails, blogs, asynchronous discussion boards, podcasts, wikis, and screencasts

- **Instructor modelling**

Of these seven types of learner-instructor interaction, instructor modelling was found to have the largest impact on students' sense of community. Again, instructors model frequently for learners in face-to-face classrooms, but this modelling must be more explicit online. Instructors can use tools like screencasts and podcasts to model skills and concepts for online learners.

- **Required participation**

Requiring students to participate in online discussions and other learning activities ensures that all students will have access to interaction with the instructor.

2. Learner-Content Interaction

In online learning environments, instructors must balance the desire to provide students with a wealth of content with the need to avoid overloading students with excess content (Garrison & Anderson, 2003). Effective online instructors carefully consider each piece of content that is provided for students and design opportunities for students to engage with content. Collaborative project-based learning (PBL) can be an effective way to get students interacting with meaningful content.

3. Learner-Learner Interaction

Numerous studies have shown that the quality of learner-learner interactions matter more than the quantity of interactions (*Garrison & Cleveland-Innes, 2005; Journell, 2008*). While online learners need multiple opportunities to interact with one another, it is more important that the instructor design quality interactions than numerous interactions.

One way to facilitate learner-learner interaction is allowing students to facilitate class discussions, either synchronously or asynchronously. Prior to having students facilitate discussions, the instructor should teach and model how to lead an online discussion, gradually releasing responsibility for facilitating discussions to students. Researchers recommend using a variety of groupings for interaction, such as whole class and small group discussions, partner assignments, and individual responses (Mayes et al., 2011). During both synchronous and asynchronous discussions, students can break out into smaller groups to engage in deeper conversations about the topic of discussion before coming back together with the whole class to share and reflect on small group conversations.

Beyond the asynchronous discussion board and synchronous class meeting, there are endless possibilities for using web tools for learner-learner interaction online.

Conclusions and suggestions

1. The teachers and the students are still used to traditional face-to-face interaction and, in order to reach better learning outcomes, the teachers must conduct an in-depth research related to best practices on interaction in e-environment.
2. Teachers need to generate frequent communication and motivate students to participate.
3. Structure discussions so that they are meaningful to students, input must be graded, questions must be attention and interest getting.
4. Instructors continuously manage students' ideas and further facilitate interactions.
5. Encourage student collaboration, relies on the use of educational technologies to simulate face-to-face meetings when students work together on assignments.
6. Respond to student comments and questions within time frames set at the beginning of the course.
7. Provide general feedback to the entire class on specific assignments or discussions, while at the same time providing individual encouragement and comments to students.
8. Provide a weekly —wrap up before the next lesson, and introduce each new week with an overview of the lesson plan and deadlines.
9. Monitor Student Progress and Encourage Lagging Students (SPEL) because students have different learning styles, instructors should monitor students and identify those who are lagging.
10. It is crucial to analyse progress and feedback after each e-course i.e. teachers must investigate feedback from graduates, to inquire positive and negative aspects of interaction and eventually improve the e-course for future users.

References

1. Zucker, D., Feldman, R. Teaching and Learning Online. Retrieved from https://www.umass.edu/oapa/sites/default/files/pdf/handbooks/teaching_and_learning_online_handbook.pdf
2. Best Practices in Online Teaching Strategies. The Hanover Research Council, year 2009, retrieved from <https://www.uwec.edu/AcadAff/resources/edtech/upload/Best-Practices-in-Online-Teaching-Strategies-Membership.pdf>

3. Brinthaupt, T. M., Fisher, L. S., Gardner, J. G., Raffo, D. M., & Woodard, J. B. (2011). What the best online teachers should do. *Journal of Online Learning and Teaching*, 7(4), 515-524.
4. Garrison, D. R., & Anderson, T. (2003). *E-Learning in the 21st century: A framework for research and practice*. London: Routledge/Falmer.
5. Garrison, D. R., & Cleveland-Innes, M. (2005). Facilitating cognitive presence in online learning: Interaction is not enough. *The American Journal of Distance Education*, 19(3), 133-148.
6. Journell, W. (2008). Facilitating historical discussions using asynchronous communication: The role of the teacher. *Theory and Research in Social Education*, 36(4), 317-355.
7. Mayes, R., Luebeck, J., Ku, H. Y., Akarasriworn, C., & Korkmaz, O. (2011). Themes and strategies for transformative online instruction: A review of literature and practice. *The Quarterly Review of Distance Education*, 12(3), 151-166.
8. Moore, M. G. (1989). Editorial: Three types of interaction. 3(2), 1-retrieved from <https://www.fractuslearning.com/2013/07/09/online-learning-environments/>
9. Robert D Wright Student-teacher interaction in online learning environments, 2014, pages 450